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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,705

03/19/2004

Seamus Doyle

A4-098 US

7528

23683

7590

07/01/2004

MOLEX INCORPORATED
2222 WELLINGTON COURT
LISLE, IL 60532

EXAMINER

TA, THO DAC

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/804,705	Applicant(s) DOYLE ET AL.	
	Examiner Tho D. Ta	Art Unit 2833	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/19/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson (6,435,903).

In regard to claim 1, Nelson discloses an electrical connector assembly 10 for mating with a complementary second connector 25 in a mating direction, comprising: a housing 4; a terminal module 1 mounted on the housing 4 for movement relative thereto between a projecting position and a retracted position and including, a dielectrical module body having a front mating end which projects from the housing 4 and a rear mounting end which mounts the terminal module 1 in the housing 4 for movement between the positions, and a plurality of conductive terminals 3 mounted on the module body and including front flexible contact ends projecting from the front mating end of the module body for engaging appropriate terminal contacts of the complementary second connector 25 and rear terminating ends secured to the module body, whereby when the second connector 25 is mated with the connector assembly 10 the contacts of

Art Unit: 2833

the second connector 25 engage the front flexible contact ends of the terminals 3 and move the terminal module 1 from its projecting position to its retracted position.

In regard to claim 6, Nelson discloses biasing means 22 for biasing the terminal module 1 toward its projecting position.

In regard to claim 7, Nelson discloses that the biasing means 22 comprises a coil spring sandwiched between the module body 1 and a portion of the housing 4.

In regard to claim 8, Nelson discloses that the housing 4 has an interior compartment (between 5 and the wall of housing 4) within which the coil spring 22 is disposed.

In regard to claim 9, Nelson discloses that the module body 1 is elongated in a direction generally transverse to the mating direction to define opposite ends of the body, and including a pair of biasing springs 22 sandwiched between the opposite ends of the body and portions of the housing 4.

In regard to claim 10, Nelson discloses that the housing 4 has a pair of interior compartments (between 5 and the wall of housing 4) near the opposite ends of the module body 1 within which the biasing springs 22 are located.

In regard to claim 11, Nelson discloses that the dielectric module body 1 includes a plurality of open grooves within which the terminals 3 are disposed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Bowden, Jr. et al. (4,775,332)

In regard to claims 2-5, Nelson does not disclose detail structure of the terminal 3.

Bowden, Jr. et al. discloses that each of the conductive terminals 16 includes a base 33 fixed in the dielectric module body 11 and the front flexible contact end 34, 35 of each terminal 16 is forwardly of the base 33 and is joined to the base 33 by a flexible spring arm 31, 32 cantilevered forwardly of the base 33; wherein the front flexible contact end 34, 35 of each terminal has a convex configuration and presents a rounded contact surface for abutting engagement by the contacts of the second connector; wherein the rear terminating end of each terminal 16 comprises a termination arm (adjacent 27, 28) projecting rearwardly of the base 33 and having a conductor termination portion 27, 28 at the distal end thereof.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nelson's invention by constructing the terminal as disclosed by Bowden, Jr. et al. in order to provide a reliable connection due to the cantilevered structure of the flexible arm as it is well known in the art.

In regard to claims 12-18, Nelson discloses generally all that is claimed (see above 102(b) rejections) except for the detail structure of terminals 3.

Bowden, Jr. et al. discloses that each of the conductive terminals 16 includes a base 33 fixed in the dielectric module body 11 and the front flexible contact end 34, 35 of each terminal 16 is forwardly of the base 33 and is joined to the base 33 by a flexible spring arm 31, 32 cantilevered forwardly of the base 33; wherein the front flexible contact end 34, 35 of each terminal has a convex configuration and presents a rounded contact surface for abutting engagement by the contacts of the second connector; wherein the rear terminating end of each terminal 16 comprises a termination arm (adjacent 27, 28) projecting rearwardly of the base 33 and having a conductor termination portion 27, 28 at the distal end thereof.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nelson's invention by constructing the terminal as disclosed by Bowden, Jr. et al. in order to provide a reliable connection due to the cantilevered structure of the flexible arm as it is well known in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**THO D. TA
PRIMARY EXAMINER**

tdt
06/30/04